

GEM: THE GLOBAL EARTHQUAKE MODEL

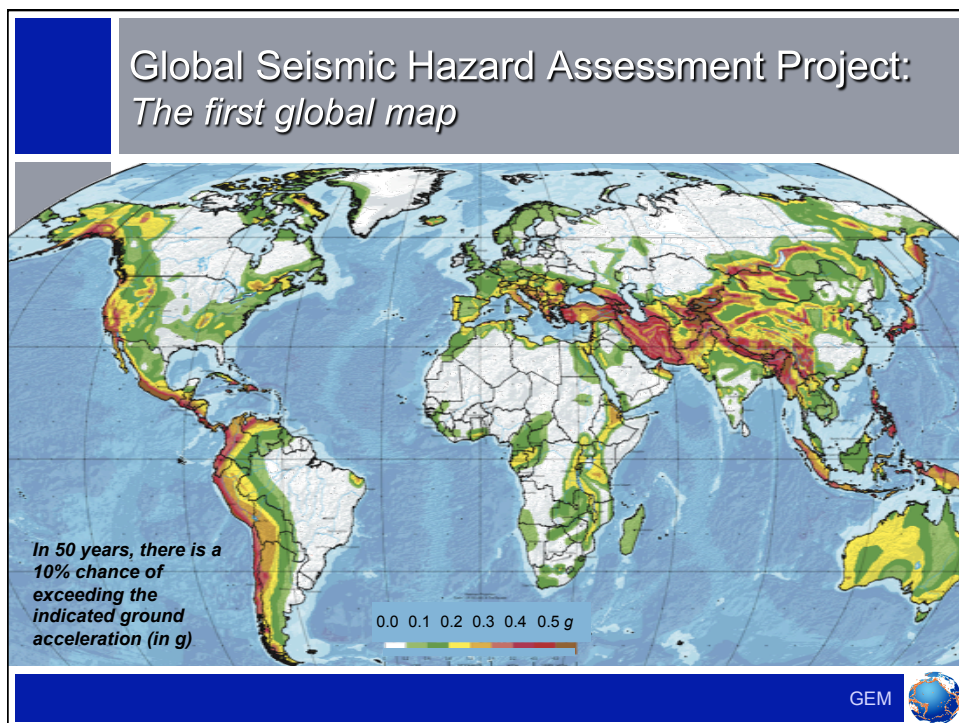


An independent standard to estimate and convey earthquake risk, raise risk awareness, and promote mitigation, insurance use, and risk transfer

A PUBLIC-PRIVATE PARTNERSHIP



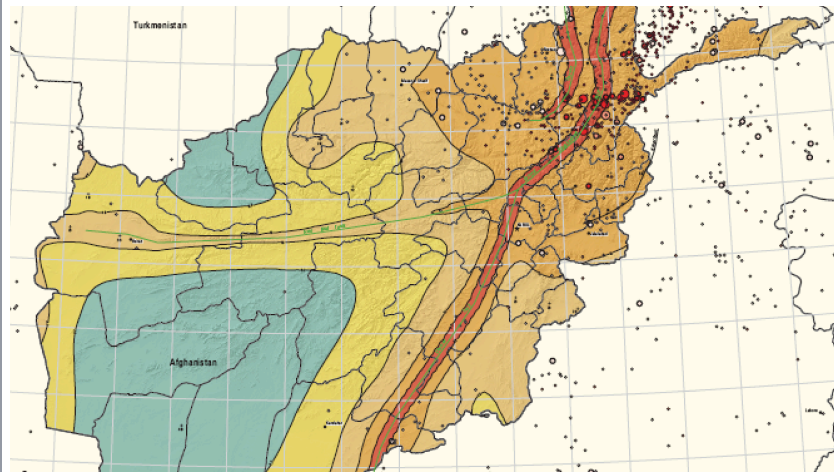
GEM strategic planning meeting: 72 scientists from 26 countries, Zurich Development Centre, June 2008



GEM will build on USGS capabilities and experience: *NSHMP*

Earthquake Hazard Map for Afghanistan

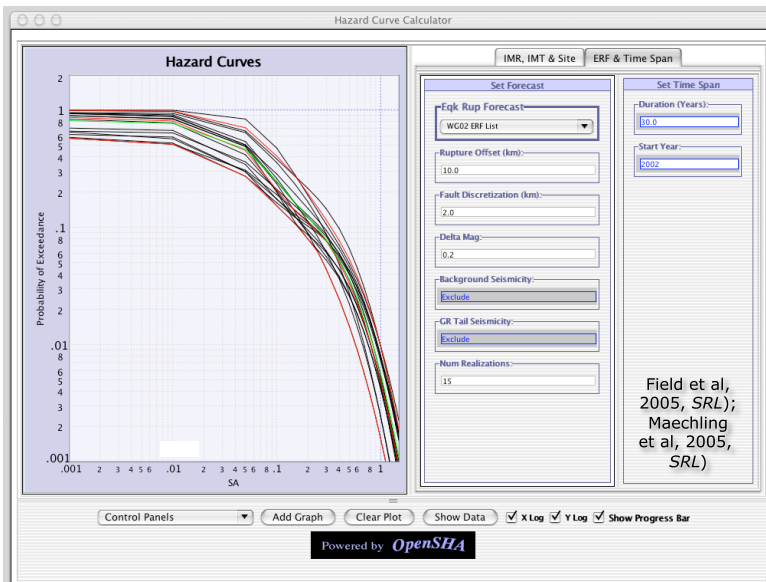
Peak Horizontal Acceleration with 2 Percent Probability of Exceedance in 50 years
By Oliver S. Boyd, Charles S. Mueller, and Kenneth S. Rukstales



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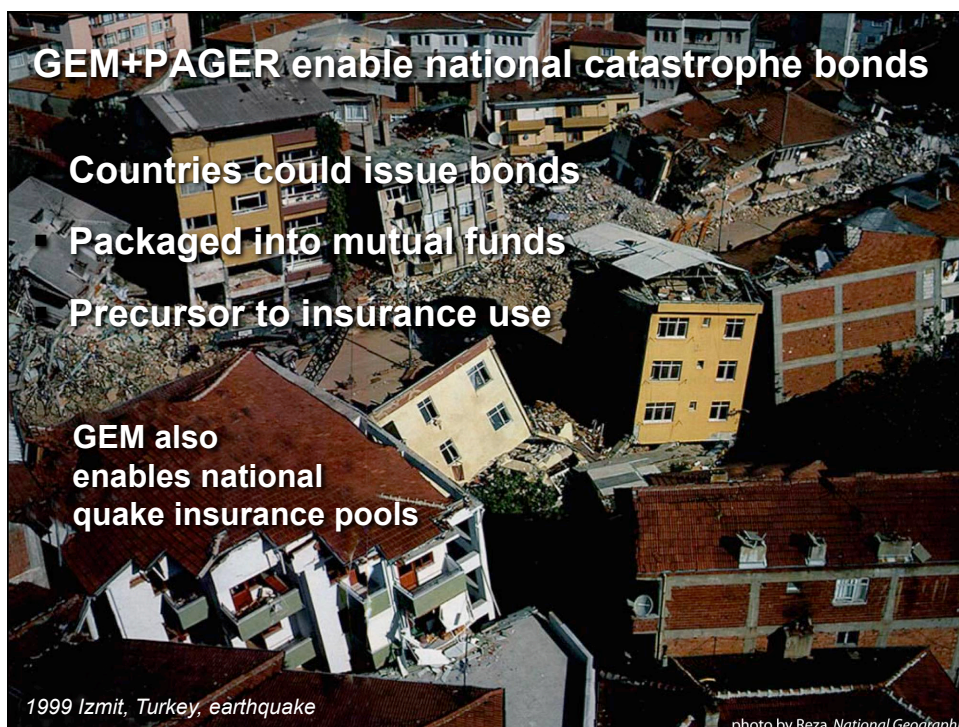
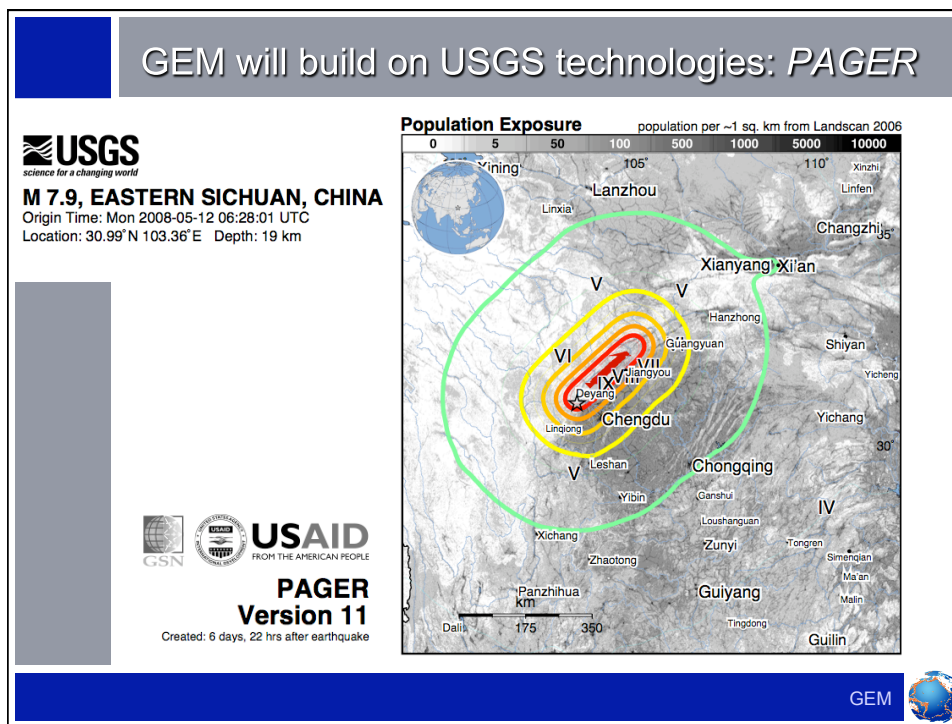


GEM will build on USGS technologies: *OpenSHA*

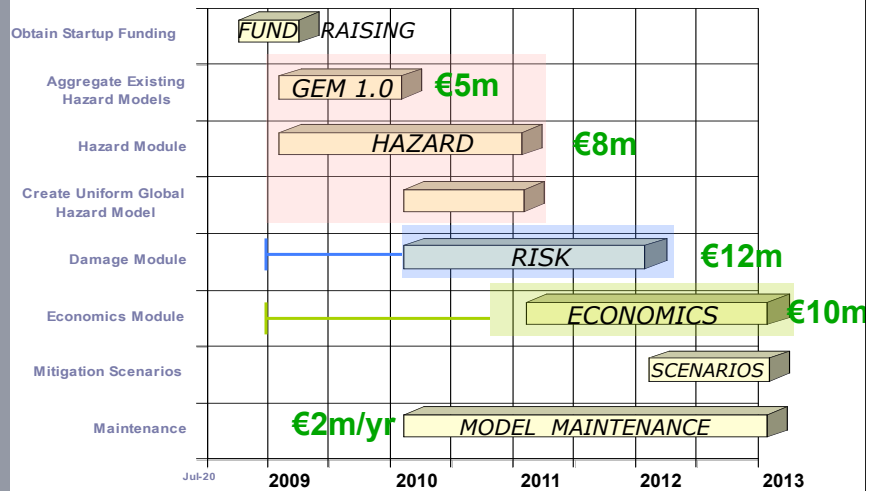


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Development of GEM's three modules



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GEM as an international public-private partnership



GEM is a program of the Global Science Forum of the Organisation of Economic Cooperation & Development

OECD member governments are being asked to bid on hosting and funding the GEM center

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GEM Sponsorship as of July 2008

Direct GEM funding

- Munich Re: € 5M pledged Oct 2007
- Zurich Financial Services: € 3M pledged Feb 2008
- AIR Worldwide: € 1M pledged May 2008
- EQECAT: €1M in negotiation July 2008
- Willis (insurance intermediary): €1M in negotiation July 2008

Regional projects coordinated with but not all directed by GEM

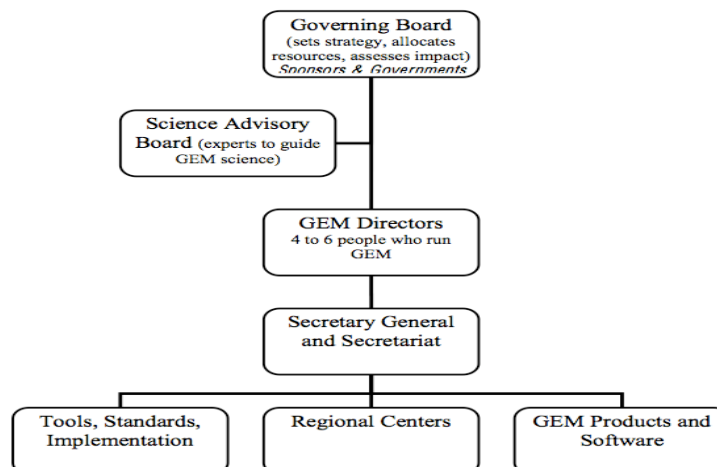
- Inter-American Development Bank: So. America/CERESIS, € 5M, proposed
- Swiss Foreign Aid Dept: Africa+Arabia, € 2M, in negotiation
- German Fed. Off. Foreign Affairs: Central Asia, \$0.7M, in negotiation
- Singapore: Seismic Risk in SE Asia. \$3.5M pledged Dec 2007
- EC FP7: Euro-Med hazard harmonization, € 3.5M, in negotiation

Totals: €13M confirmed and €13M in negotiation

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GEM management once established in a host country in 2009



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Government cost of membership

Table 1: Basic Financial Contributions from Country Members in the Initial Year of GEM

Gross Expenditures on Research and Development (GERD) (US \$)	Examples of countries at this level of GERD* (non-OECD nations listed in <i>italic</i>)	First-year GEM contribution (Euro)
GERD > \$50,000 million	US, Japan, Germany, <i>China</i>	€ 275,000
\$50,000 m > GERD > \$25,000 m	France, Korea, UK, <i>Russia</i>	€ 170,000
\$25,000 m > GERD > \$10,000 m	Canada, Sweden, Spain, Italy, Australia, Switzerland, <i>Taiwan</i>	€ 100,000
\$10,000 m > GERD > \$2,000 m	Turkey, <i>Singapore</i>	€ 70,000
\$2,000 m > GERD > \$1,000 m	New Zealand	€ 30,000
GERD < \$1,000 m	Iceland	€ 15,000

* The list of Country Members will differ from the example countries listed

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